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### **Research Interest:**

My research combines satellite and three-dimensional chemistry climate model data to investigate the complex interaction, feedback and characteristics of global atmospheric chemistry, long-range and hemispheric transport and climate change. Understanding these feedbacks and their non-linear relationship provide answers to several policy-driven questions of local versus imported emissions, air-quality mitigation and combating global climate change.

### **Educational History with dates**

- ❑ **PhD Geosciences** (May 2007): Department of Geosciences, University of Hamburg, through the International Max Planck Research School on Earth System Modelling (IMPRS-ESM), Hamburg, Germany. March 2004 – March 2007.
- ❑ **Masters in Modelling and Simulation of Complex Realities** (Sept. 2003): The Abdus Salam International Centre for theoretical Physics (ICTP), and the International School for Advanced Studies (SISSA), Trieste, Italy. Oct. 2001 – Sept. 2003.
- ❑ **M.Sc. Engineering Physics** (only course work completed): Department of Physics, Obafemi Awolowo University (OAU), Ile-Ife, Nigeria. Aug. 2000 – Sept. 2001.
- ❑ **B.Sc. Physics**, CGPA 4.40 (out of 5.00), 2<sup>nd</sup> Class upper division. (January 1998): Department of Physics, Obafemi Awolowo University, Ile-Ife, Nigeria. Sept. 1992 – Jan. 1998.

### **Academic fellowships, awards, honours and prizes**

- ❑ March 2004 – March 2007: **Zeit Foundation PhD fellowship** award
- ❑ Sept. 2006: **IGAC partial funding** to cover accommodation and conference registration at the Joint CACGP/IGAC/WMO Conference, held 17 – 23 September 2006 in Cape Town, South Africa.
- ❑ Oct. 2001 – Oct. 2003: **UNESCO-IAEA-ICTP Masters fellowship** to study at ICTP, Trieste, Italy.
- ❑ Nov. 1998: **Cyril Onwumechili Prize** for the student with the best overall performance in the BSc Physics degree examination, at the department of Physics, OAU, Ile-Ife, Nigeria.
- ❑ Nov. 1998: **Faculty Prize** for the best graduating student in the final examination in the Faculty of Science, OAU, Ile-Ife, Nigeria.

### **Employments with dates**

- ❑ **Postdoctoral Research Scientist**, California Institute of Technology, Jet Propulsion Laboratory, Pasadena, CA, USA. March 2008 – till date
- ❑ **Visiting scientist**, Max Planck Institute for Meteorology, Hamburg, Germany. June 2007 – Feb. 2008.
- ❑ **PhD student**: IMPRS-ESM, Hamburg, Germany. March 2004 – May 2007.
- ❑ **Graduate assistant to** by Prof. Matteo Marsili, ICTP, Trieste, Italy. Oct. 2003.
- ❑ **Master's student**: ICTP, Trieste, Italy. Oct. 2001 – Sept. 2003.
- ❑ **Graduate Assistance**, Department of Physics, OAU, Ile-Ife, Nigeria. Aug. 2000 – 2007.
- ❑ **Physics and Mathematics teacher at Asa High School, Ukwa-west, Abia State Nigeria**: position paid by Shell Petroleum Development Company East, Port-harcourt, Nigeria, during National Youth Service Corps (NYSC). Aug. 1998 – July 1999.
- ❑ **Customer Relation Officer**: Industrial and General Insurance, Victoria Island, Lagos, Nigeria. Jan 2000.

### **Educational and Community Service**

- ❑ During the National Youth Service Corps in Ukwa-West, Abia State, Nigeria, I held community enlightenment talk once per week to secondary school students and interested persons. Talk covers many interesting but broad subjects such as choosing a career, easy steps to learning/studying, HIV-AIDS and so on.
- ❑ I have served as a referee for these scientific journals:
  - Atmospheric Environment (since 2007)
  - Atmospheric Chemistry and Physics (since 2009)
  - Environmental Monitoring and Assessment (since 2009)

### **Peer-reviewed journal**

- ❑ Rast, S, M. G. Schultz, I Bey, T van Noije, **A M. Aghedo**, G. P. Brasseur, T. Diehl, M. Esch, L. Ganzeveld, I Kirchner, L. Kornbluh, A Rhodin, E Roeckner, H Schmidt, S Schroeder, U Schulzweida, P. Stier, K Thomas, S Walters, Evaluation of the tropospheric chemistry general circulation model, ECHAM5-MOZ and its application to the analysis of interannual variability in tropospheric ozone from 1960 – 2000, in review *J. Geophys. Res.*
- ❑ **Aghedo A. M.**, S Rast, M. G. Schultz, Sensitivity of tracer transport to model resolution, forcing data and tracer lifetime in the general circulation model ECHAM5, *Atmos. Chem. Phys. Discuss.*, 8, 137-160, 2008.
- ❑ **Aghedo A. M.**, M. G. Schultz and S. Rast (2007), The influence of African air pollution on regional and global tropospheric ozone, *Atmos. Chem. Phys.*, 7, 1193-1212.

### **Non-peer reviewed publications**

- ❑ **Aghedo, A. M.** (2007), The impact of African air pollution: A global chemistry climate model study, PhD thesis, University of Hamburg, Hamburg, Germany.

- ❑ **Aghedo, A. M.** (nee Bamiwo) (2003), Clusters, structure and dynamics inherent in sustainable development indicators. Masters' thesis, International Centre for Theoretical Physics, Trieste, Italy.
- ❑ **Bamiwo A. M.** (1997): The influence of air pollution on foodstuff using Energy Dispersive X-ray Fluorescence spectrometer, BSc. Dissertation, Obafemi Awolowo University, Ile-Ife, Nigeria.

### **Presentation at scientific conferences (selected)**

- ❑ Aghedo, A. M., K. Bowman, H. W. Worden, D. Shindell, G. Faluvegi, J. F. Lamarque, S. S. Kulawik, M. Parrington, D. Jones, L. Horowitz, S. Rast, M. G. Schultz and L. Pozzoli, Comparison of satellite-based instantaneous radiative forcing to four global chemistry climate models, JPL postdoc poster day, Sept. 29 2009, Pasadena, CA, USA.
- ❑ Aghedo, A. M., Emissions impact and reflection on establishing the monitoring network in Africa, presented at Danish Development Research Network workshop "Urban Environmental Management and Air quality in Less Developed Countries", Copenhagen, Denmark. 30 Nov. 2007.
- ❑ Aghedo, A. M., V. Thouret, C. Mari, M. G. Schultz, S. Rast, A. Minga, and A. Mariscal (Solicited talk): Tropospheric ozone budget over western Africa: new highlights from model and ozonesonde, presented at IGAC/CACGP/WMO Workshop on Atmospheric Chemistry at the Interfaces, September 17 – 24, 2006, Cape town, South Africa.
- ❑ Aghedo, A. M., M. G. Schultz and S. Rast: The influence of African air pollution on regional and global tropospheric chemistry, presented at IGAC/CACGP/WMO Workshop on Atmospheric Chemistry at the Interfaces, September 17 – 24, 2006, Cape town, South Africa.
- ❑ Aghedo, A. M., M. G. Schultz and S. Rast: The influence of African air pollution on regional and global tropospheric chemistry, presented at 1st African Monsoon Multidisciplinary Analysis (AMMA) International Conference, Dakar, Senegal. 28 Nov. – 4 Dec. 2005.
- ❑ Aghedo, A. M., M. G. Schultz and S. Rast, A. Guenther and C. Wiedinmyer: Climate impact of biogenic volatile organic compounds (VOC) emissions, *Geophysical Research Abstracts*, Vol. 7, 03390, 2005, presented at EGU general assembly, 24 – 29, April 2005, Vienna, Austria.

### **Membership of professional organizations**

- ❑ Full Member – Third World Organization for Women in Science (TWOWS) since 2003.
- ❑ Member – European Geophysical Union (EGU) since 2005
- ❑ Member – Earth Science Women Network (Eswn) since April 2007
- ❑ Member – American Geophysical Union, since Jan 2009.